

C. REMARKS

A. CLAIM AMENDMENTS

Claims 1-20 are the original claims in the application. Claims 21 and 22 are new. The support in the specification for claim 21 appears in the following places among others:

- a. paragraph 0019 (discusses a dry powder);
- b. paragraph 0020 (discusses a dry powder);
- c. paragraph 0056 (indicates a preferred dry alkaline admixture);
- d. paragraph 0049 (indicates the solid particles);
- e. paragraph 0055 (pneumatically convey the product to the upper region of the furnace – the “pneumatically” implies a dry product because a person of ordinary skill in the art would know that “pneumatically” would only apply to a dry product and not an aqueous product); and
- f. paragraph 0057 (discloses that the amount of coating agent is used to create the coated alkaline admixture is from .05 to .15% percent by weight of the alkaline admixture – a person of skill in the art would know adding this small amount of coating agent would result in a dry product).

The support for new claim 22 appears in paragraph 0057 of the specification among other places.

B. CLAIM REJECTIONS

35 U.S.C. § 102

Claims 1, 2, 6, 11, 12, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by *Torbov et al.* U.S. Patent No. 4,960,577 (“‘577”).

In order for a claim to be anticipated, a single piece of prior art must show all of the claimed elements. *W.L. Gore & Assocs. v. Garlock, Inc.*, 712 F.2d 1540 (Fed. Cir. 1983).

Claim 1 requires, “a coating agent that improves dispersability and delays calcination of the alkaline admixture within a combustion zone” (emphasis added).

‘577 discloses, “An aqueous dispersion of a sorbent is injected into a first zone within the combustion installation outside the combustion zone” (emphasis added). (Column 2, Lines 40-43.)

Fig. 1 of ‘577 shows the combustion zone as dashed lines and clearly shows that the aqueous dispersion enters the boiler above the combustion zone. (Column 4, Lines 20-26). Because the aqueous dispersion enters above the combustion zone, it never enters the combustion zone.

‘577 does not disclose that the aqueous water “delays calcination of the alkaline admixture within the combustion zone.”

‘577 incorporates by reference U.S. Patent No. 4,555,996 (“‘996”) for methods of injecting the aqueous spray dispersions. (Column 3, Lines 58-60). “996 shows injecting an aqueous solution within the combustion zone.” (Fig. 3, Reference No. 36). However, ‘996 does not disclose that the aqueous spray delays calcination of the alkaline admixture within the combustion zone. The results of injecting the aqueous solution within the combustion zone show that the aqueous solution removed less SO₂ than the dry solvent. (Column 5, Table 1, Runs 1 and 5).

Because ‘577 does not disclose all of the limitations of claim 1, it does not anticipate claim 1.

Claim 2 contains all of the limitations of claim 1. As described above, ‘577 does not disclose all of the limitations of claim 1. Therefore, ‘577 does not anticipate claim 2.

Claim 6 contains all of the limitations of claim 1. As described above, ‘577 does not disclose all of the limitations of claim 1. Therefore, ‘577 does not anticipate claim 6.

Claim 11 requires the limitation that “a coating agent that improves dispersability and delays calcination of the alkaline admixture within a combustion zone” and “adding the alkaline admixture to a fossil fuel feed”.

As described above, ‘577 does not disclose a coating agent that delays calcination of the alkaline admixture within a combustion zone. Additionally, ‘577 does not disclose adding the alkaline admixture to a fossil fuel feed. ‘577 incorporates by reference ‘996 for the methods of injecting the aqueous spray. However, ‘996 does not disclose adding the alkaline admixture to a fossil fuel feed. In fact, ‘996 indicates that adding to the fossil fuel feed leads to deactivation and loss of additive activity. (Column 1, Lines 63-67, Column 2, Lines 1-2). Injection of a slurry into the combustion zone or at any other location with the boiler presents a much more complicated and costly approach with respect to alkaline injection. The system requires tanks, pumps and injection lances which will withstand high temperatures and require sophisticated monitoring and control systems.

Because ‘577 does not disclose all of the limitations of claim 11, it does not anticipate claim 11.

Claim 12 contains all of the limitations of claim 11. As described above, ‘577 does not disclose all of the limitations of claim 11. Therefore, ‘577 does not anticipate claim 12.

Claim 16 contains all of the limitations of claim 11. As described above, '577 does not disclose all of the limitations of claim 11. Therefore, '577 does not anticipate claim 16.

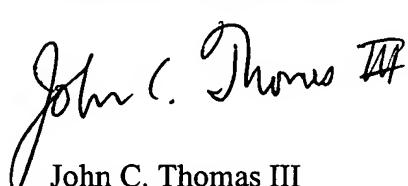
New claim 21 contains the requirement that the alkaline admixture having a coating agent is in a dry form. '577 discloses injection in an aqueous phase.

New claim 22 contains the requirement that the amount of the coating agent is .05 to .15 percent by weight of the alkaline admixture. '577 does not disclose this requirement.

C. CONCLUSION

In view of the above, it is submitted that the claims presented in the application are in condition for allowance. Accordingly, reconsideration and allowance of the claims are requested.

Respectfully submitted,

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John C. Thomas III
Reg. No. 52,282
Paul A. Beck & Associates, P.C.
Suite 100, 1575 McFarland Road
Pittsburgh, PA 15216-1808
Phone (412) 343-9700
Fax (412) 343-5787
Customer No. 09961